MAGNETORESISTIVE READ SENSOR WITH REDUCED EFFECTIVE SHIELD-TO-SHIELD SPACING

Abstract of the Disclosure

A magnetoresistive read sensor includes a first shield layer and a first gap layer over the first shield layer. The read sensor further includes a spin-valve stack over the first gap layer. The spin-valve stack includes a seed layer over the first gap layer. At least a portion of the seed layer includes a soft-magnetic material. The spin-valve stack further includes an antiferromagnetic layer over the seed layer. The antiferromagnetic layer is magnetically decoupled from the seed layer. The spin-valve stack further includes a free layer over a first portion of the antiferromagnetic layer. The read sensor further includes a bias structure adjacent to the free layer. The bias structure is located over a second portion of the antiferromagnetic layer and is isolated from the seed layer by the second portion.